The species of the first section of the genus or subgenus *Thalassogeron* at present reach the number of four, and may be distinguished according to the following key:—

Culmen in adult bright yellow; sides of the bill black:

- a. Culminicorn rounded posteriorly.
 - a'. Lower edge of mandible yellow.
 - a." Smaller; outer toe 117 mm.; culminicorn reaching the feathers of the forehead
 - b." Larger; outer toe 124 mm.; culminicorn not reaching the feathers of the forehead

of the mandible not vellow

- b'. Lower edge of mandible not yellow....b. Culminicorn pointed posteriorly; lower edge
- T. culminatus.
- T. desolationis.
 T. eximius.
- T. chlororhynchus.

XXX.—Notices of recent Ornithological Publications.

Bryant on the Western Meadowlark.

[A determination of the economic status of the Western Meadowlark (Sturnella neglecta) in California, by Harold Child Bryant. Univ. Cal. Publ. Zool., xi. 1914, pp. 377–510, pls. 21–24.]

Mr. Bryant has been for some time engaged in solving the question of the habits of the Western Meadowlark, and as to whether its usefulness outweighs its destructiveness, and this paper appears to be an elaboration of a previous one reviewed in the 'Ibis' for 1912 (p. 688).

A very large amount of work has been done and the present results are based on the examination of over 2000 stomachs taken at different seasons of the year in different parts of California, so that the conclusions should be based on sound and ample evidence.

The injury to crops which the Meadowlark is accused of, consists of destroying sprouting grain (especially barley) by boring down beside the sprout and eating the kernel. On the other hand this small amount of damage, which can be

easily avoided by deeper planting, is more than overbalanced by the destruction for food, especially in the nesting season, of large numbers of noxious insects.

Chandler on Areas of Distribution and Extent of Specific Modification.

[The effect of extent of distribution or speciation. By Asa C. Chandler. American Nat., xlviii. 1914, pp. 129-160.]

This is an essay in which an attempt is made to show that, as the range of a group of animals or birds is extended, the number of species increase out of proportion to the genera, and the genera out of proportion to the families.

This thesis is tested by the author in a series of tables containing the number of genera and species of restricted as compared with wide areas. One example so taken deals with the birds of various Californian areas. Here we find in the restricted San Bernardino Mts. area (2000 sq. miles) 97 genera and 121 species, a ratio or index of modification of 1.25 species to one genus; in southern California (30,000 sq. miles) the figures are 153 and 199, giving an index of 1.30; in the whole of California (158,000 sq. miles) the figures are 186 and 347 and the index 1.87, thus showing that as the area increases, "speciation" or specific modification acts more strongly.

Many other points are brought out in this essay in regard to the theoretical explanation of these facts, and as to how much speciation is due to isolation, the time-element and other factors, but these cannot here be satisfactorily dealt with and all we can now do is to draw attention to the main thesis.

Chandler on the Plumage of Circus hudsonius.

[Modifications and adaptations to function in the feathers of *Circus hudsonius*. By Asa C. Chandler. Univ. Cal. Publ. Zool., vol. xi. 1914, pp. 329-376, pls. xvi.-xx.]

This paper gives a very complete account of the pterylography, moults and plumage of the adult Marsh Hawk

(Circus hudsonius). The different types of feathers clothing different parts of the body are all separately discussed, and their structure, both macroscopic and microscopic, elucidated, and considerable space is occupied with suggestions as to the meaning and use of the various types of feather structure.

Chapman on new Neotropical Birds.

[Diagnoses of apparently new Colombian Birds.—II, By Frank M. Chapman. Bulletin Amer. Mus. Nat. Hist., xxxiii. 1914, pp. 167–192, map.

Descriptions of a new Genus and Species of Birds from Venezuela. Id. ibid. pp. 193–197.]

The latest expedition of the American Museum of Natural History, under the leadership of the author of these papers, to Colombia, took place between January and May of last year. The district explored was the "Bogotá region," whence so many species have been described from native-made "Bogotá" skins. These are of course without data and have in many cases changed colour, and it was thought advisable to obtain a good series of scientifically-made specimens. Some 2300, representing over 500 species, were brought back. In the first paper diagnoses of 8 new species and 20 new subspecies are given, all from different parts of Colombia.

The second paper contains descriptions of the novelties obtained by another American Museum expedition, under Mr. L. E. Miller. In December 1912 he ascended the Orinoco to the neighbourhood of Mt. Duida, a most remote spot in the southernmost part of Venezuela, but owing to the illness of his companion, Mr. F. X. Iglseder, he was compelled to return before his work was completed. In addition, some 600 specimens were secured at Cristobal Colon on the Paria peninsula, which juts out from Venezuela towards the island of Trinidad. New species of Geotrygon, Neomorphus, and Nonnulla are diagnosed, and a new genus, Microxenops, is proposed for a new species, M. milleri, a form allied to Xenops and referred to the Furnariidæ.

Flower on Indian Zoological Gardens.

[Report on a Zoological Mission to India in 1913 by Capt. L. S. Flower, Director Egyptian Government Zoological Service. Pp. 1-100, 12 pls. Cairo (Govt. Press), 1914. 8vo. Price 5s.]

Last summer Capt. Stanley Flower was sent on a mission to India to inspect the Zoological Gardens and other scientific institutions there, to report on the management, and to arrange for exchanges with the Gardens at Gîza. In the present report he gives an account of his journeys of nearly 8000 miles in India and of the characteristic features of all the collections visited. It is for the most part with the larger mammals and reptiles that he was concerned, but there are many references to birds which should be interesting to readers of 'The Ibis.'

A table on page 6 gives a list of twelve zoological gardens at present existing in India, and of these three were of special importance—Calcutta for its large collections, containing many rare species; Trivandrum, which, owing to the work of Mr. H. S. Ferguson, is a most complete and scientifically arranged institution; and Peshawar for the admirable way in which the animals are looked after.

A series of twelve photographs, including one of the aviary in the Peshawar Gardens, illustrates the report, and were mostly taken by Capt. Flower himself.

Grinnell on Berkeley Birds.

[A second list of the Birds of the Berkeley Campus. By Joseph Grinnell. Condor, vol. xvi. 1914, pp. 28-40.]

It is a pleasant practice in the States to set a University or College in an area of open ground; this, planted with trees and grass, often forms a beautiful setting to the various buildings.

The State University of California, which is at Berkeley, situated on the landward or eastern shore of the Bay of San Francisco, on the opposite side to the city of the same name, is fortunate enough to be surrounded by a large park or campus of 550 acres, rising from an elevation of

200 feet at its western edge to a height of 1300 feet at its eastern boundary on the crest of the Berkeley Hills.

This campus is, on its lower elevations, planted with groves and gardens, while the higher parts are truly "wild"; it contains a large varied avifauna of some 97 species, and Mr. Grinnell has here given us a list of these with remarks on the status of each. A previous edition published in the "University of California Chronicle" in 1911, contained the names of 76 species only.

Grinnell on the Birds of the Valley of the lower Colorado River.

[An account of the Mammals and Birds of the lower Colorado Valley, with special reference to the distributional problems presented, by Joseph Grinnell. Univ. California Publ. in Zool. vol. xii. 1914, pp. 51-294, 11 pls., 9 text-figs.]

The River Colorado, after passing through the Grand Cañon, which is chiefly in the State of Arizona and which, with other cañons, forms the characteristic feature of the middle third of the river, forms in the lower part of its course the boundary line between the States of California and Arizona, from Mojave to Yuma, a distance of about 150 miles in a straight line. Below Yuma, the river enters Mexican territory and shortly afterwards empties itself into the Gulf of California.

The present paper deals with the fauna of this lower third of the river, where the stream runs in sober fashion in a more or less wide valley, while the country on either side forms one of the driest and hottest deserts in the world.

An expedition was led by Mr. Grinnell between February and May, 1910, to carry on field-work in this region. The party commenced their survey at the town of Needles and travelled by boat down the river, from place to place, obtaining 1374 specimens of birds and 1272 of mammals, all of which are now in the California Museum of Vertebrate Zoology.

In discussing the distribution of the forms of animal life here and elsewhere, Mr. Grinnell recognizes what he calls three distinct orders of distributional behaviour; these he terms zonal, faunal, and associational. The first of these orders, the zonal, which is associated with the name of Mr. Merriam, is dependent on temperature, that is to say, the distribution of each form of life is limited by certain extremes of temperature, especially during the reproductive season.

The second order of distribution is that very many species appear to be kept within geographic bounds by limits of atmospheric humidity or the reverse.

The third order of distributional control, the associational, is dependent on local conditions—soil and vegetation chiefly—which delimit the existence of a species beyond a certain area.

It is with these "associations" that the preliminary discussions of this paper are mostly occupied. Mr. Grinnell distinguished a River association, a Willow-cottonwood (Salix and Populus) association, a Tule (i. e. Reed-bed) association, an Arrow-weed (Pluchea) association, and Quail-bush (Atriplex), Mesquite (Prosopis), Saltbush (Atriplex), Creosote (Larrea), Cat-claw, Saguaro (i. e. Giant Cactus), and finally, Encelia (i.e., Rocky Hills) associations.

He gives lists of characteristic and exclusive birds inhabiting each of these associations, which lie more or less in order as one passes from the river-bed across the valley to the desert country lying on either side.

There is a long list of 150 species of birds, the distribution and status of each of which is discussed in the main part of the paper.

Hartert's Palæarctic Birds.

[Die Vögel der paläarktischen Fauna. Von Ernst Hartert. Heft viii. (Bd. ii. 2). Pp. 961–1088. Berlin (Friedländer), Aug. 1913. 4 Marks.]

The last-issued part of Hartert's great work on the Palæaretic Birds completes the Owls and commences on the Accipitres, of which only one genus, *Falco*, containing the Falcons and Kestrels, is fully dealt with.

One interesting change is made from the commencement of the Owls which certainly enhances the value of the work from the systematist's point of view. This is that the author now gives a complete synonymy of the generic names, naming and discussing the types of each genus. In the first volume the want of this information certainly detracted from the value of the work.

No very startling changes of nomenclature are proposed beyond those already familiar to the users of the recently published 'Hand-list of British Birds,' but it would surely have been better to have settled one way or another which generic names should be used for Tengmalm's Owl and the Little Owl. In the former case, *Egolius* Kaup 1829 and *Cryptoglaux* Richmond 1901; in the latter *Athene* Boie 1822 and *Carine* Kaup 1829, are given as alternatives, Dr. Hartert being apparently undecided whether the two earlier names in each case should be rejected or not through the prior use of *Egolia* and *Athena*. Surely it would have been wiser to come to some decision one way or another.

Of the Eagle-Owl (Bubo bubo) as many as eighteen distinct forms or subspecies are recognised. This seems to be an unnecessarily large number, though of course without going carefully into the matter it is not possible to make a serious criticism. Three new subspecies are distinguished in the present part for the first time, i. e., Bubo bubo swinhoei, south China, Athene noctua lilith, Mesopotamia, and Falco tinnunculus dacotiæ, Eastern Canary Islands.

Howard's British Warblers.

[The British Warblers. A History with Problems of their Lives. By H. Eliot Howard, F.Z.S., M.B.O.U. Illustrated by Henrik Grönvold. Part 8, Dec. 1913. London (Porter).]

The present part of Mr. Howard's detailed study of the British Warblers is chiefly devoted to the Garden and Wood Warblers. The Barred (Sylvia nisoria) and the Subalpine (S. subalpina) are dismissed with short paragraphs of description and distributional details, the former being accorded one of Grönvold's delicately tinted plates; the plate of the latter appeared in the previous part.

Most of our readers are by this time familiar with Mr. Howard's work, which is now approaching completion,

and with the extraordinarily minute and careful observations which must be necessary, to present so intimate a picture of the everyday life of these somewhat shy birds.

The Garden Warbler is compared with the Blackcap, to which it is closely related in many respects, both in structure and habits. A good deal is said about the "territory" taken up by the males on their arrival in spring, where they await the coming of the female, which is often a week or ten days later. The male proclaims his appropriation of an estate by incessant singing; this goes on until the females arrive and mating has taken place; after this, Mr. Howard remarks, there is a gradual decrease of song.

The peculiar attitudes assumed during the period of sexual activity are illustrated by three black-and-white plates of the male and one of the female, and are described with much detail.

The present part also contains a coloured plate of the Dartford Warbler and two photogravure plates of the Wood Warbler.

Baron Loudon's Fifth Journey to Central Asia.

[Ergebnisse meiner V. Reise nach dem Talyscher Tieflande und Transkaspien vom 30 i. (12 ii.) bis zum 1 (14) v. 1911. Baron Harald Loudon. Ann. Mus. Zool. Acad. Imp. Sci. St. Pétersbourg, xviii. 1914, pp. 431-510.]

The first half of this paper contains an account of Baron Loudon's journey, extracted from his diary. Leaving Riga, his home, on January 30, he reached the Black Sea on February 4 and travelled on to Tiflis, where some little time was spent. Thence he went to Talysch, the most southeastern corner of Russia, lying between the Caspian Sea and the Persian frontier, where some time was spent in collecting. Then crossing the Caspian, he travelled along the Central Asian Railway to Samarkand and back to Russia by the northern route via Orenburg, making many side-visits at interesting places.

With the assistance of his brother and cousin, and a skinner, he was able to bring back some 2000 bird-skins as

well as a good set of mammals, reptiles, and insects, all of which are now, or will eventually be placed in the Museum at St. Petersburg.

Two lists are given, one of the Transcaucasian collection and one of the Central Asian, but only those species are treated of at length which were not obtained on previous journeys.

Two new subspecies, Turdus viscivorus sarudnyi and T. pilaris sarudnyi are noticed, but they appear to have been first described in the "Ornith. Monatsber." for 1912 (vol. xx. pp. 5-6).

Mathews on Australian Birds.

[The Birds of Australia. By Gregory M. Mathews. Vol. iii. parts 4, 5, Dec. 1913 & Mar. 1914, pp. 301-444, pls. 167-189. London. (Witherby & Co.) 4to.]

In these parts Mr. Mathews provides his readers with several excellent discussions of various family and generic groups; so that, if they do not in all cases find themselves able to agree with his conclusions, they will at least be glad to have the debatable points thoroughly examined. In this connection it may be well first to note the following subspecies, which were formerly proposed, but have been sunk in the present instalment of the work:—

Gallinago australis oweni (= Subspilura megala), Irediparra gallinacea melvillensis, Orthorhamphus magnirostris melvillensis, O. m. queenslandicus, Ibis molucca alliyator, Carphibis spinicollis fitzroyi, Spatherodia regia stalkeri, Platibis flavipes whitei, Xenorhynchus asiaticus rogersi, Ardea sumatrana gilberti, Herodias alba neglecta, Notophoyx novæ-hollandiæ parryi, and N. pacifica alexandræ.

On the other hand, the author proposes a new genus, Subglareola, for Glareola ocularis of Verreaux, which he removes from Sharpe's Galactochrysea.

The next important point, and one about which there has been much dispute, is that he now, for the sake of uniformity, accepts Brisson's genera, following the ruling of the last International Zoological Congress.

Two well-known birds are classified in quite a new way. In the Scolopacidæ Mr. Mathews considers that the bill (and other characteristics) of the Australian Painted Snipe are not "Scolopacine," and proposes for that species and its congeners the new family Rostratulidæ. Again, the Australian "Dotterel" is clearly shown to be an abberant Courser, and is therefore included in the family Glareolidæ.

All the birds treated in these parts are of somewhat exceptional interest, especially as regards their life-histories, and the selections as to these seem to us particularly well chosen.

Under the Jacanas Parra is said to be antedated by Jacana, and it is proposed to change the Family name from Parridæ to Jacanidæ, but the former is usually accepted, and we do not like the change or consider it necessary. Similarly for the Stone-Curlews Burhinidæ is used for Œdienemidæ; but even if we accept this we should be very chary of using the term "Burhinine" in English; these adjectives are only useful when the Family name is firmly settled. In this Family Orthorhamphus is accepted as differing from Esacus, while the bills are well figured to show the distinctions. Four subspecies of Burhinus magnirostris at least are recognised.

We may pass quickly over the Australian Crane under its still unfamiliar name of *Mathewsia* to note that *Threskiornis* is preferred to *Ibis* and *Spatherodia* upheld for (*Platalea*) regia, but must pause longer to join cordially in overthrowing Billberg's *Egatheus* for the Glossy Ibises, and restoring the better known *Plegadis*. The Australian form of this group is found to differ from the European and is called *P. falcinellus peregrinus*.

Similarly the Jabiru is *Xenorhynchus asiaticus australis*, for it never, says the author, ought to have been confounded with its Indian congener.

The Grey Heron is practically rejected as an Australian species, and the reader will find that in three cases Gould's names are resuscitated for other Herons, though used in a subspecific sense, while it must be remembered that Myola is Mr. Mathews' new name for Ardea pacifica.

Phillips on Size Inheritance.

[Size Inheritance in Ducks. Journal of Experimental Zoology, Philadelphia, xii. 1912, pp. 369-380.

A Further Study of Size Inheritance in Ducks, with Observations on the Sex Ratio of Hybrid Birds. Id. ibid. xvi. 1914, pp. 131-148.]

These papers contain the results of a series of experiments carried out by the author at the Laboratory of Genetics of the Bussey Institution.

The birds used were the large white Rouen variety and the smaller domesticated Mallard, which are perfectly fertile with each other, and the object was to find out whether, in the F₂ generation, any striking segregation of size occurred. The results did not throw any very clear light on the question of the Mendelian inheritance of the character of size, and the author suggests that this may be due to "the high coefficient of variability in both the parent races." Some other interesting results are recorded.

Phillips on Birds from the Sudan.

[Two new African Birds. By John C. Phillips. Proc. Biol. Soc. Washington, xxvi. 1913, pp. 167-168.

Notes on a collection of Birds from the Sudan. By John C. Phillips. Bull. Mus. Comp. Zool. Harvard Coll. lviii. 1913, pp. 1-27.]

Accompanied by Dr G. M. Allen the writer made an excursion up the Blue Nile from Khartoum in December 1912 and January 1913. Their farthest point was Fazogli, a place close to the Abyssinian frontier, where Mr. Butler found many birds in May, but Mr. Phillips was rather disappointed with his booty thence. A list of the species obtained is given, and in it are included two supposed new forms described in the first paper quoted, viz. Caprimulgus eleanoræ from Fazogli and Passer domesticus chephreni from Gîza, near Cairo.

Robinson on Malayan Birds.

[List of a small collection of Birds and Mammals from Gunong Kerban, Perak. By Herbert C. Robinson, M.B.O.U. Journ. Fed. Malay States Museums, Kuala Lumpur, v. 1914, pp. 23-27. On a further collection of Mammals and Birds from the hills of Negri Sembilan. By H. C. Robinson, M.B.O.U., and C. Boden Kloss, M.B.O.U. Ibid. pp. 51-57.]

The first of these short papers deals with the fauna of Gunong Kerban, a mountain in Perak, near the Perak-Kelantan boundary, which attains a height of 7170 ft., the second highest elevation in the peninsula. This is the first time any zoological collections have been made on this mountain, and they unfortunately proved to be of little special interest, as the species found were almost entirely identical with those in the Batang Padang mountains, about 40 miles farther south. Forty species are recorded.

The second paper deals with further collections made in the hills of Negri Sembilan, a state lying southwards from Perak, whence 72 species are here noted.

Salvadori and Festa on the Hawfinch of Sardinia.

[Nuova specie di Frosone della Sardigna. T. Salvadori ed E. Festa. Boll. Mus. Zool. Anat. comp. Torino, vol. xxxix. 1914, no. 681, pp. 1-2.]

Count Salvadori proposes to distinguish the Hawfinch of Sardinia under the name Coccothraustes insularis, sp. n. It has the underparts greyish brown with a rufous-brown tinge and is slightly smaller than the typical mainland form.

Schalow on Müller's Calamoherpe brehmii.

Über "Calamoherpe Brehmii" Müller. Von Herman Schalow. Journ. f. Ornith. 1914, pp. 104-110, pl. 3.]

In this little paper Dr. Schalow elucidates the history of an obscure little bird first described by Joh. Mat. Bechstein in his "Gemeinnützige Naturgeschichte Deutschlands" (Leipzig 1795, p. 669), under the name of Motucilla fasciata.

The plate which is reproduced shows it to be a Reed-Warbler with a curious narrow subterminal band of orange-red across the tail-feathers. Beehstein states in his description that he only once met with a single example, and this in a secluded spot in the "Thüringer-wald." It is next mentioned by C. L. Brehm in his "Handbuch der

Naturg. aller Vögel Deutschlands" (1831, p. 447). Here it is referred to by the name *Calamoherpe Brehmii* Müller. This latter description has until now escaped the notice of bibliographers.

Herr Schalow has recently found in the library of the ornithological department a manuscript description with a plate, which is here reproduced, by "Herr Canzelist Müller in Brünn," from which Brehm's quotation and description are undoubtedly drawn. This now forgotten naturalist seems to have also obtained a single example of this curious aberration near Brünn, in Austria.

In commenting on this Herr Schalow gives some instances which have come to his notice of similar variations in other species as, for instance, in *Turdus torquatus*, *T. musicus* and *T. merula*; also in *Prunella modularis* and *Sylvia curruca*.

Schalow on the Nutcracker in Thuringia.

[Über das Brut-Vorkommen von Nucifraga caryocatactes caryocatactes L. in Thüringen. Von Herman Schalow. Journ. f. Ornith. 1914, pp. 148–156, map.]

In this paper Herr Schalow discusses the breeding-range of the two forms of Nuteracker in Germany, for it has recently been shown that the so-called Siberian or Thickbilled form, Nucifraga c. macrorhynchus, breeds as far west as East Prussia. The typical N. c. caryocatactes breeds in the mountains of southern Germany, from the Black Forest to the Reisen-gebirge, which lie on the borders of Bohemia and Silesia, and though there appears to be an outlying breeding-colony in the Harz the bird does not nest in the Thuringian Mountains, which appear to be quite suitable for it.

In this paper the author examines the evidence which has from time to time been brought forward to prove that the Nutcracker breeds in Thuringia, but comes to the conclusion that it does not, and never has done so. The understanding of the paper is greatly facilitated by a sketch-map showing the breeding-places, and also the mountainous regions where you might expect to find the Nutcracker breeding, but do not.

Stresemann on the Birds of Ceram.

[Die Vögel von Seran (Ceram). Aus den zoologischen Ergebnissen der II. Freiburger Molukken-Expedition. Von Erwin Stresemann. Nov. Zool., Tring, xxi. 1914, pp. 25–153, pls. iii.-v.]

One of the East India Islands at which Mr. Stresemann spent a good deal of time during his recent expedition was Ceram, or, as he prefers to call it, Seran. He was there from April 29 to December 26, 1911, and obtained a fine collection of 539 examples of 118 species.

Though the coastal region of Ceram is well-known and has been often visited by naturalists, few seem to have penetrated into the interior of the island, and it was here that Mr. Stresemann's efforts were chiefly directed. The highest peak, Gunung Pinaia, reaches an altitude of 2760 m. (circa 8000 ft.), and collections were made here and on other high mountains.

In this paper is also included an account of the birds collected in the same island by the late Mr. W. Stalker, in 1909, for the Natural History Museum, before he went to Dutch New Guinea with the B.O.U. Expedition, and where he unfortunately lost his life.

The list of species dealt with numbers 153, and includes new subspecific forms of Hemiprocne, Dendrobiastes, Myiagra, Pachycephala, Androphilus, Zosterops, Erythrura and Dicrurus, all described from Ceram. In addition a new Megapodius is described from Buru, and a new Zosterops from Ternate, while two new Terns, Sterna bergii thalassina and Sterna sumatrana mathewsi, are distinguished from the southern Indian Ocean, a proceeding which seems hardly consonant with the title of the paper.

In addition to excellent field notes in the case of all the birds collected by himself, Mr. Stresemann adds some interesting historical notices of many of the larger birds, chiefly from the work of Francois Valentyn, published in 1726.

The moult of Eos bornea, Merops ornatus, Aplornis metallicus, and of Graucalus n. melanops is described in detail, and an account is given of the growth of the curious

beak of *Rhyticeros*, the corrugations of which have been supposed to indicate the age of the bird. This, Mr. Stresemann believes, is not the case.

A coloured plate illustrates Oreosterops pinaiæ and Stigmatops monticola, new species previously described, and Androphilus d. musculus, here described for the first time.

Stresemann on the History of the Paradise-bird.

[Was wussten die Schriftsteller des XVI. Jahrhunderts von den Paradiesvögeln? Ein Beitrag zur Geschichte der Ornithologie. Von Erwin Stresemann. Nov. Zool., Tring, xxi. 1914, pp. 13–24, 2 pls.]

The traffic in the plumage of the Paradise-bird commenced some time previous to the discovery of the Aru Islands or New Guinea, and the earliest notice of the birds in print is believed by Mr. Stresemann to be that of the Papal Secretary, Gian Francisco Poggio Bracciolini, who published in 1492, at Milan, a work entitled, "India recognita." The information contained in this was chiefly derived from Nicolo de Conti, a Venetian merchant, who travelled in the east from 1415 to 1440, and spent some nine months in Java. He alludes to certain birds found in Java, of the size of a dove, with long tails and wings which are used as ornamental head-dresses.

About a hundred years later, in 1521, Magalhaen's expedition reached Tidore in the Moluccas, and two Birds of Paradise were given to Elcano, now the commander of the expedition, to take back to the King of Spain.

Mr. Stresemann has traced out in detail all these old allusions to the Bird of Paradise, and has also discovered the origin of Aldrovandi's *Manucodiata prima* and *Manucodiata secunda*, in some interesting old water-colour drawings by an unknown Italian artist of the 16th century, now preserved in the Tring Museum.

Thayer and Bangs on Siberian Birds.

[Notes on the Birds and Mammals of the Arctic coasts of East Siberia. Birds by John E. Thayer and Outram Bangs. Proceedings of the New England Zoological Club, v. 1914, pp. 1–66.]

This is an account of a collection made by Mr. Johan Koren chiefly at the mouth of the Kolyma River in northeast Siberia. Mr. Koren, in the summer of 1911, sailed his schooner through Behring Strait and along the north coast of Siberia to the mouth of the Kolyma River, where larch forest occurs and where he wintered. He set off again in June 21 of the following year, but was caught in the ice and wrecked before he reached Behring Straits. He saved most of his collections and "cached" them, got out overland, and returning the following spring was able to recover them intact. He must have indeed been a man of uncommon grit.

The list of birds is a very interesting one and well worthy of study. Although the winter climate was very severe—85° below zero of Fahrenheit was not uncommon—there were a good many winter birds. Siberian Jay, Raven, Holböll's Redpole, Hawk Owl, Snowy Owl, Short-eared Owl, Gyrfalcon, Tetrao parvirostris, and Lagopus lagopus koreni, the last-named a new subspecies, all seem to be able to exist in this arctic climate.

It is curious that though Buturlin found a large breeding colony of Ross's Gull (*Rhodostethia rosea*) at the Kolyma delta in 1905, and although Mr. Koren was informed that these birds were abundant and bred there in 1911, he himself in 1912 was only able to find one stray example of this beautiful Gull.

Three American species are here added to the list of Palæarctic birds—Pisobia pectoralis, Haliaëtus leucocephalus alascanus, and Hylocichla aliciæ aliciæ, while a number of new subspecies are proposed: Lagopus lagopus koreni, Circus cyaneus cernuus, Budytes flavus plexus, and Otocorys alpestris euroa.

Walpole-Bond on rare British Birds.

[Field-studies of some Rarer British Birds, by John Walpole-Bond. Pp. ix+335. London (Witherby), 8vo. 7s. 6d.]

Mr. Walpole-Bond here gives us an account of his own field-studies of what he considers to be "some rarer British birds," although why he includes the Short-eared Owl in this category is not easy to explain. The following seventeen species are discussed under this heading:—(1) Dartford Warbler; (2) Pied Flycatcher; (3) Cross-bills in Sussex; (4) Cirl

Bunting; (5) Chough; (6) Raven; (7) Wood-Lark; (8) Short-eared Owl; (9) Hen-Harrier; (10) Common Buzzard; (11) Golden Eagles in Scotland; (12) Golden Eagles in Ireland; (13) Red Kite; (14) Peregrine; (15) Hobby; (16) Merlin; (17) Gadwall; (18) Black Guillemot. Each bird is dealt with in a separate chapter, from the author's personal observations. The nesting habits of each species are described in great detail and the local distribution carefully noted. Mr. Walpole-Bond considers many of our "rarer birds," amongst which may be specially mentioned the Dartford-Warbler, Buzzard and Peregrine, to be much less rare than is generally supposed. The reverse, however, must be regretfully said of the Hen-Harrier, Kite and the Irish Golden Eagle. Chapter xiv., which deals with Peregrine Falcons, is perhaps the most pleasing account which Mr. Walpole-Bond has written. Having stated that he visited 70 eyries between 1904 and 1912, the author continues:-".... there is hardly a headland or cliff range of any altitude round our entire coast-line where a pair of these noble birds does not at least attempt to breed annually: while with some few modifications the same may be said for certain inland mountain-ranges in Ireland, Cambria, the Lakes, Yorkshire and Scotland. "

It must be remarked that the style in which the essays are written is not on a par with the matter which they contain. The use which the author makes of brackets seriously detracts from the pleasure which might otherwise be gained from a perusal of his work. Mr. Walpole-Bond shows himself to be an enthusiastic and careful observer, and his book may be confidently recommended to every student of British bird-life.

Aquila.

[Aquila. Zeitschrift für Ornithologie. Redact. Otto Herman. xx. pp. 1-585, Budapest, 1913.]

The greater part of the stout volume of 'Aquila,' which is the organ of the Central Bureau for Ornithology of Hungary, is taken up with reports on the spring migration in that country in 1912, on which there are articles contributed by Dr. K. Lambrecht, K. Hegyfoky, Dr. Weigold, L. Schenk, and the Editor. The general conclusion seems to be that the migration during March was carlier, and that from March 31 to May 7 was distinctly later than the normal, due to the bad weather which occurred at the end of March and beginning of April. The amount of material—observations recorded—is very large, and it is all plotted out for each species according to a geographical plan.

There are also several articles dealing with the ringing of birds in Hungary. The three species chiefly chosen for this purpose are the White Stork, the Swallow, and the Black-headed Gull, of which 628, 1166, and 684 respectively were ringed. The Storks travelled south to South Africa (4 examples recaptured) and south-east to Muscat, in southern Arabia, a new line of migration. The Black-headed Gulls seem to travel chiefly south-west to Italy and Tunis. The ringing of Swallows seems to have clearly brought out the fact that individual birds nearly always return to the same spot, and even to the same nest, year after year. One bird in particular, ringed in 1908 by Peter Müller, is known to have returned to the same nest for six successive years.

An important anatomical paper by Dr. Greschik deals with the submaxillary glands of various species of birds, and gives some account of their secretions and their use in digestion. This is illustrated by two plates. Finally, there are two papers on fossil birds; one, by Dr. Shufeldt, on the affinities of an extinct Ostrich-like form, Diatryma gigantea Cope, and D. ajax Shufeldt, from eocene beds in Wyoming, U.S.A., and another, by Dr. Lambrecht, giving a list of bird-remains chiefly of quaternary age found in various caves in Hungary and now in the collection of the Central Bureau.

There are also a number of shorter papers which we cannot even give a list of. As previously, 'Aquila' is printed bi-lingually in Magyar, and either German or English, in parallel columns.

Cassinia.

['Cassinia. A Bird Annual.' Proceedings of the Delaware Valley Ornithological Club of Philadelphia, no. xvii. for 1913, pp. 1-68. Philadelphia, 1914, 8vo.]

Apart from articles of purely local interest 'Cassinia' nearly always contains something to interest other ornithologists apart from those of Philadelphia.

Some notes on Alexander Wilson, who died in 1813, just one hundred years ago, by Mr. Witmer Stone, has the first place in the present number. Wilson died in the prime of life at the age of forty-seven, leaving his great work on "American Ornithology" little more than half completed. With Andubon, he occupies the same position as Yarrell in England, and the Naumanns in Germany, and as he lived and died in Philadelphia, it is appropriate that the centenary of his death should be noticed in 'Cassinia.' A photograph of what appears to be a characteristic and artistic statue, by Mr. Alexander Calder, now placed in the library of the Academy of Natural Sciences, form a frontispiece of the number. Wilson is represented in hunting dress, with his gun lying on the ground beside him, bending over a freshly-killed bird which he is studying intently.

The editor, Mr. R. T. Moore, writes at length on the songs of the Oven-bird (Seiurus aurocapillus) and reduces several variations of them to musical notation; Mr. Samuel N. Rhoads contributes an account of a bird-roost which he has recently discovered in New Jersey. This is a sandy knoll covered with pines above and deciduous trees below. Here come every evening, in very large numbers, birds of different species to roost, such as Starlings, Grackles, Crow-Blackbirds, Flickers, American Robins and many others.

Other papers deal with the local Fish-eating birds by H. W. Fowler, a census of Turkey Buzzards in Delaware, and a report on the spring migration of 1913 in the Delaware Valley.

Journal S. African Ornithologists' Union.

[The Journal of the South African Ornithologists' Union. Vol. ix. 2 parts, 130 pp. July and December, 1913.]

One of the longest articles in the present volume is by Mr. Austin Roberts, of the Pretoria Museum, who writes a most interesting account of his observations on the birds of the "bushveld" some twenty-five miles north of Pretoria, and of the nests and eggs he has obtained in this district. He still maintains, and we can see no valid reason for doubting his views, that the Pin-tailed Widow-bird (Vidua serena) is parasitic, laying its eggs in the nest of the Common Waxbill (Estrilda astrilda). He also proposes a new subspecies, Poliospiza gularis transvaalensis, for the Transvaal form of the Streaky-headed Seed-eater. In a second paper, "Some Rambling Notes on Birds," Mr. Roberts describes how he found the nest and eggs of Anthus chloris and Heteronyx ruddi, which appear to have been previously unknown, in the Wakkerstroom district, and writes on the habits of the Grass-Warblers (Cisticola), on which he has recently published a study in the 'Annals' of the Transvaal Museum.

From the pen of Mr. Swynnerton we have a charming account of a pair of tame Ground-Hornbills (Bucorax cafer), which he had on his farm in the Melsetter district of Southern Rhodesia for some time. Apart from their human characteristics and their interest as pets, Mr. Swynnerton was anxious to make use of them for certain experiments with regard to the palatability or otherwise of various insects, and he found that, especially when they were hungry, they were far from discriminating, though even they will normally refuse Acræid and Danaine butterflies.

Mr. Haagner, the Editor, contributes an article on the White Stork in South Africa, reprinted from 'Aquila'; as many as fifty-five birds, ringed in Europe, have up to now been captured in South Africa, and recently a few individuals have been noticed to remain through the winter, though the greater number, no doubt, only come for the southern

summer, from September to March. Mr. Haagner also writes on the nidification of *Francolinus sephæna* in the Pretoria Zoological Gardens, and on the habits and distribution of the Secretary Bird in South Africa.

The South Australian Ornithologist.

[Vol. i. No. 1. January, 1914. 24 pp.]

This new journal, of which we have recently received the first number, is the organ of the South Australian Ornithological Association, and is edited by a committee of which Mr. F. R. Zietz is the President, and is presumably published at Adelaide, though there is no mention of the fact on the cover or elsewhere. It would be well to give this information in future for the benefit of bibliographers and others interested.

The number opens with some account of the history of South Australian Ornithology, by Mr. R. Crompton, from which we learn that a museum was started in Adelaide so long ago as 1855, and that the Association itself dates from 1899.

The principal paper in the part is by Mr. Zietz, and deals with a collection of birds made by M. W. D. Dodd, in Melville Island, Northern Territory, for the South Australian Museum. In less than two months Mr. Dodd was able to secure examples of 85 species, 30 of which are additional to those collected for Mr. G. M. Mathews by Mr. Rogers and recorded in a recent number of the 'Austral Avian Record.' We fear Mr. Zietz, however, has not seen the January-number of 'The Ibis,' which contains a paper by Mr. Mathews bringing the total number of birds recorded from this island up to 167. Descriptions of six new subspecies are contained in the present paper, and it is to be hoped that these will not clash with those described by Mr. Mathews.

Mr. E. Ashby proposes to name the Forest Kingfisher, of Northern Territory, *Haleyon macleayi cæruleus*, although there are already two forms of the same species described from the same territory. An interesting notice of the manner in which the seeds of Loranthus, a mistletoe-like plant, pass through the body of Dicæum without losing their sticky covering, so that they adhere to where they are dropped and subsequently germinate, is communicated by Mr. A. M. Morgan; while Mr. Mellor informs us that the Cuckoo (Cacomantis rubricatus) has been observed depositing an egg in the nest of Acanthiza pusilla, in the neighbourhood of Adelaide, where it was supposed to be only a winter visitor.

List of other Ornithological Publications received.

FESTA, E. Isola di Roda. Escursioni Zoologiche. (Torino, 1913.)

FOSTER, A. H. The Birds of North Hertfordshire. (Hitchin, 1914.)

Gurney, J. H. Ornithological Report for Norfolk (1913). (Zoologist, May, 1914.)

LECHNER, A. A. VAN PELT. "Oologica Neerlandica," Pts. 6-7. (The Hague, 1914.)

Schaub, S. Das Gefieder von Rhinochetus jubatus und seine postembryonale Entwicklung. (N. Denksch. Schweiz. Nat. Gesell. Bd. IL. Abh. 2, 1914.)

Shufeldt, Dr. R. W. Extreme Emaciation in a Specimen of the Snowy Owl. ('Auk' xxxi. No. 2, 1914.)

Avicultural Magazine. (3rd Series, Vol. v. Nos. 6-8, 1914.)

Bird Lore. (Vol. xvi. No. 2, 1914.)

Bird Notes. (New Series, Vol. v. No. 4, 1914.)

British Birds. (Vol. vii. Nos. 11, 12; Vol. viii. No. 1, 1914.)

Bulletin Soc. Zool. Genève. (Tome i. Fasc. 20-22, 1913.)

Bulletin S. African Orn. Union. (No. 3, Pt. 1, Feb., 1914.)

The Condor. (Vol. xvi. Nos. 2, 3, 1914.)

The Emu. (Vol. xiii. pt. 4, 1914.)

Irish Naturalist. (Vol. xxiii. Nos. 3-6, 1914.)

Messager Ornithologique. (Vol. v. Moscow, 1914.)

Report of the Poultry Expert for 1912-13. (Adelaide, 1914.)

Sarawak Museum. Twelfth Report for 1913. (Sarawak, 1914.)

The Scottish Naturalist. (Nos. 27-30, 1914.)

Smithsonian Instn. Publ., No. 2256. Opinions Rendered by the International Commission on Zoological Nomenclature. (Opinions 57-65. Washington, March, 1914.)

Zoologica. Scientific Contributions of the New York Zoological Society. (Vol. i. Nos. 12-15, 1914.)

Zoologischer Anzeiger. (Bd. xliv. No. 1-8, 1914.)